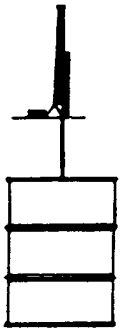


LARRY SEVENKER

Consulting Engineer

4148 LOIRE DR.
KENNER, LA. 70065

(504) 468-1909

September 18, 1989

Mr. Joe Pinkham
Cargill, Inc.
518 East Fourth Street
Watkins Glen, NY 14891

RE: Mechanical Integrity Testing & UIC Permit Modification

Dear Joe:

A Mechanical Integrity Tests was conducted on the 13-14-16 well gallery at the Watkins Glen plant September 12, 1989 and the wells and gallery held the pressure test for three hours. Testing was conducted during the plant boilout to allow for a time period when the cavities can remain stable.

Gallery wells 13-14-16 were pressurized with the plant injection pump before the rental pump was operated to raise the system to the testing pressure. Water was injected into well 14 while the valves were closed on the brine production well 13. The system was pressured to 405 psi with the rental pump operating at well 16. The wells were all closed in and allowed to stabilize before starting the test. At 12:30 p.m. September 12, 1989, well 16 was holding a constant water pressure on the cavity of 405 psi. A constant pressure of 405 psi was held for 3 hours with 0 psi pressure loss. The dead weight tester and pressure chart recorder were placed on well 16. All wells of the gallery would be pressurized by injecting water in wells 14 and 16, which were the injection wells for the gallery.

The 13-14-16 well gallery is rather large and requires a long time to raise the gallery pressure to 405 psi. Due to the cavity size and the need to maintain the total brine supply to the plant, the pumps were turned off to start the cavity test at a 405 psi test pressure. Had more time been available to continue pumping, the 13-14-16 cavity would have tested at a higher pressure as indicated by the zero pressure change within the 3 hour test. The 15-17 well gallery passed an earlier test at 434 psi. All the wells and cavities in both the gallaries have passed the mechanical integrity tests. I would suggest that the maximum operation pressure for both galleries be raised to 420 psi for the UIC permit. This is only slightly higher then the dead head pressure conditions for the plant injection pumps. There is some difference between the pump pressure and the wellhead pressure due to friction losses.

If you have any questions or comments, please contact me.

Sincerely,

Larry Sevenker
Consulting Engineer

Attachments

cc Steve Ketchum

MECHANICAL INTEGRITY TEST
PRESSURE TEST

September 18, 1989

Company: Cargill, Inc.
Address: 518 East Fourth Street
Watkins Glen, NY 14891

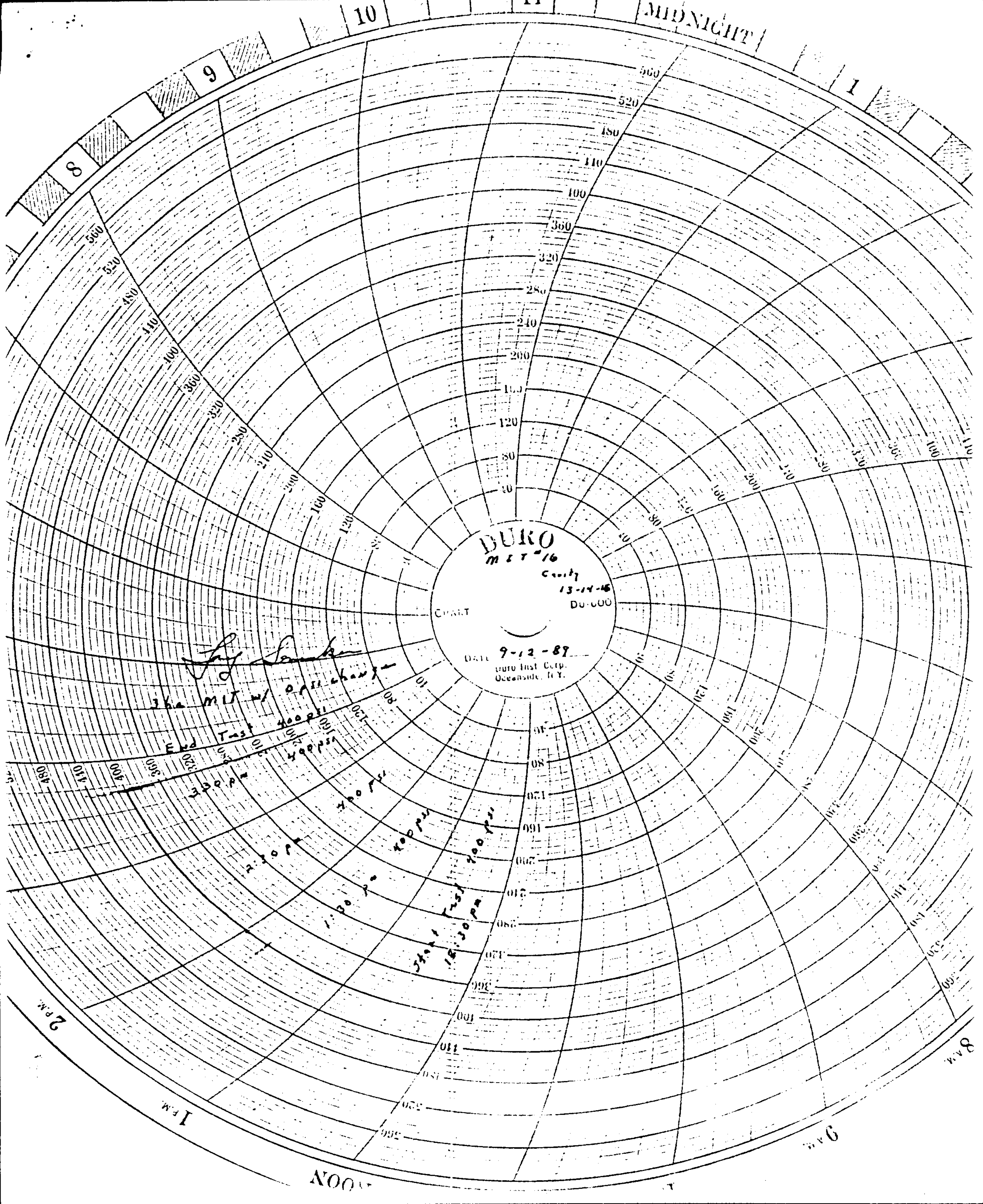
Contact: Mr. Joe Pinkham / Mr. Steve Ketchum
Phone: (607) 535-2411
Test Conducted By: Larry Sevenker
Test Date: September 12, 1989
Test Location: Well 16
Type Test: Cavity Hydro Test
Gallery Wells Tested: #13, #14, & #16
Fluid In Well: #13 - Brine, #14 - Water, & #16 - Water

Time	Pressure Recordings: Dead Wt Tester @ 16 psi	Pressure Gauge @ 16 psi	Pressure Recorder @ 16 psi	Remarks
12:30 P.M.	400	405	400	Start Test
12:45 P.M.	400	405	400	
1:00 P.M.	400	405	400	
1:15 P.M.	400	405	400	
1:30 P.M.	400	405	400	
1:45 P.M.	400	405	400	
2:00 P.M.	400	405	400	
2:15 P.M.	400	405	400	
2:30 P.M.	400	405	400	
2:45 P.M.	400	405	400	
3:00 P.M.	400	405	400	
3:15 P.M.	400	405	400	
3:30 P.M.	400	405	400	Complete Test
Change	0 psi	0 psi	0 psi	

Test Results: Well #13, #14, & #16 were tested with a dead weight water pressure of 400 psi for 3 hours with a 0 psi change during the test. (Chart @ #16 was 400 psi & gauge @ #16 was 405 psi during the test.)
Cavity and wells 13-14-16 held a very successful pressure test for 3 hours without any pressure change.

Pressure Test Report

Larry Sevenker
Consulting Engineer
Date: 9-18-89



MIDNIGHT
1
8
9
10
DURO
CHART
DATE 9-12-89
Duro Inst. Corp.
Oceanside, N.Y.
End Test 400psi
Start Test
12:30 pm
1:30 pm
2:30 pm
3:30 pm
400 psi
NOON
1 P.M.
2 P.M.
8 A.M.
9 A.M.

MECHANICAL INTEGRITY TEST
PRESSURE TEST

June 20, 1989

Company: Cargill, Inc.
Address: 518 East Fourth Street
Watkins Glen, NY 14891

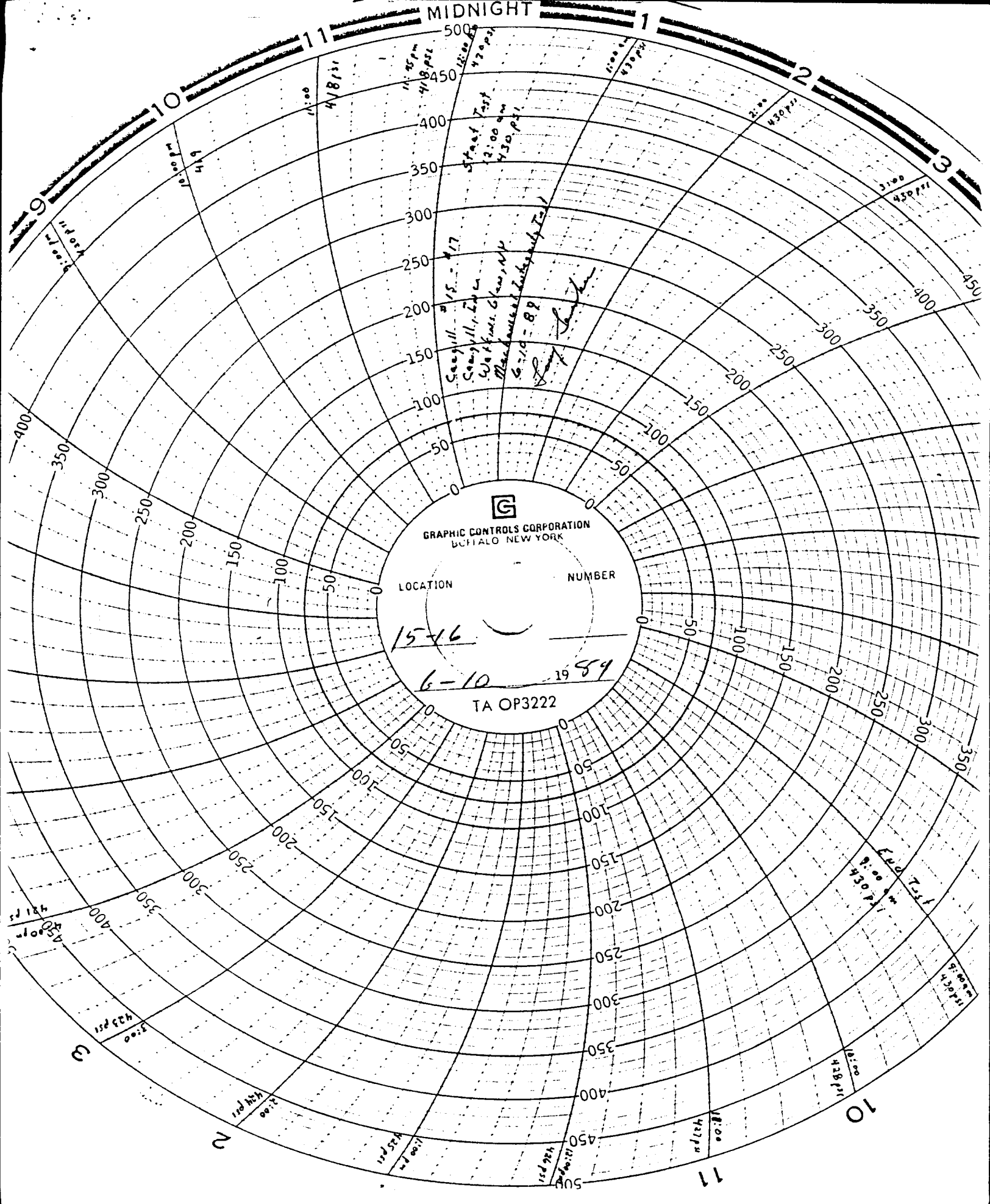
Contact: Mr. Joe Pinkham / Mr. Steve Ketchum
Phone: (607) 535-2411
Test Conducted By: Larry Sevenker
Test Date: June 10, 1989
Test Location: Well 15
Type Test: Cavity Hydro Test
Gallery Wells Tested: #15 & #17
Fluid In Well: #17 - Brine, #15 - Water

		Pressure Recordings		
Time	Dead Wt Tester psi	Pressure Gauge psi	Pressure Recorder psi	Remarks
12:00 A.M.	430	435	430	Start Test
9:00 A.M.	430	435	430	Complete Test
Change	0 psi	0 psi	0 psi	

Test Results: Well #15 was tested with a dead weight water pressure of 430 psi for 9 hours with a 0 psi change during the test.

Pressure Test Report

Larry Sevenker
Consulting Engineer
Date: 6-20-89


MIDNIGHT
GRAPHIC CONTROLS CORPORATION
BUFFALO NEW YORK
LOCATION
NUMBER
15-16
6-10
19 89
TA OP3222

Please type or print. Please read instructions on reverse. Approval expires 10-31-

US ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF DRINKING WATER
WASHINGTON, DC 20460

EPA

UIC ANNUAL FEDERAL REPORTING SYSTEM
PART III: MECHANICAL INTEGRITY OF EXISTING INJECTION WELLS

(This information is collected under the authority of the Safe Drinking Water Act)

I. DATE PREPARED (Mo, day, year)	II. STATE	III. REGION
09/18/89	NY	

IV. REPORTING AGENCY
Cargill, Incorporated

V. REPORTING PERIOD (Mo, year)
FROM 6-89 TO 6-90

ITEM				CLASS AND TYPE OF INJECTION WELLS				
				I	II			III
					SWD 2D	ER 2R	HC 2H	
VI. NUMBER OF EXISTING WELLS TESTED FOR MECHANICAL INTEGRITY			Deficiency					0
			Total					3
VII. MECHANICAL INTEGRITY TESTING	(1) TEST OF SIGNIFICANT LEAK	A. Annulus Pressure Monitoring	Deficiency					NA
			Total					NA
		B. Casing/Tubing Pressure Test	Deficiency					0
			Total					3
		C. Monitoring Records Reviewed	Deficiency					
			Total					
		D. Other Tests (Specify) well& cavity	Deficiency					0
			Total					3
		E. Number of Wells Witnessed for Mechanical Integrity						0
	(2) TEST OF FLUID MOVEMENT	F. Cementing Record Reviews	Deficiency					0
			Total					0
		Field Tests — G. Temperature Log	Deficiency					0
			Total					0
		H. Noise Log	Deficiency					0
			Total					0
		I. Radioactive Tracer Log	Deficiency					0
			Total					0
		J. Cement Bond Log	Deficiency					0
			Total					0
		K. Other Tests (Specify)	Deficiency					0
			Total					0
		L. Number of Wells Witnessed for Mechanical Integrity						0
VIII. REMEDIAL ACTION	A. Casing Repaired/Squeeze Cement							0
	B. Tubing/Packer Repaired							0
	C. Plugging/Abandonment			1				0
	D. Other Remedial Actions							0
	E. Number of Wells Receiving Remedial Action							0

IX. REMARKS *(Attach additional sheets if necessary)*

Three wells in one gallery (13-14-16) were pressure tested and held for +3 hours.

EPA Form 7520-3 (6-83)